

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

GREEN MOUNTAIN GLASS, LLC AND
CULCHROME, LLC,

Plaintiffs,

v.

SAINT-GOBAIN CONTAINERS, INC. dba
VERALLIA NORTH AMERICA,

Defendant.

Civil Action No. 14-cv-392-GMS

JURY TRIAL DEMANDED

PLAINTIFFS' ANSWERING CLAIM CONSTRUCTION BRIEF

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Max L. Tribble, Jr. (admitted *pro hac vice*)
SUSMAN GODFREY L.L.P.
1000 Louisiana Street, Suite 5100
Houston, TX 77002
Telephone: (713) 651-9366
Facsimile: (713) 654-6666
mtribble@susmangodfrey.com

Steven M. Shepard (admitted *pro hac vice*)
SUSMAN GODFREY LLP
560 Lexington Avenue, Fifteenth Floor
New York, NY 10022
Telephone: (212) 72902010
Facsimile: (212) 336-8340
sshepard@susmangodfrey.com

Robert S. Bramson (admitted *pro hac vice*)
BRAMSON & PRESSMAN
1100 East Hector Street, Suite 410
Conshohocken, PA 19428
Telephone: (610) 260-4444
Facsimile: (610) 260-4445
rbramson@b-p.com

Brian E. Farnan (Bar No. 4089)
Michael J. Farnan (Bar No. 5165)
FARNAN LLP
919 North Market Street, 12th Floor
Wilmington, DE 19801
Telephone: (302) 777-0300
Facsimile: (302) 777-0301
bfarnan@farnanlaw.com
mfarnan@farnanlaw.com

Justin A. Nelson (admitted *pro hac vice*)
Matthew Berry (admitted *pro hac vice*)
John Schiltz (admitted *pro hac vice*)
SUSMAN GODFREY L.L.P.
1201 Third Avenue, Suite 3800
Seattle, WA 98101-3000
Telephone: (206) 516-3880
Facsimile: (206) 516-3883
jnelson@susmangodfrey.com
mberry@susmangodfrey.com
jschiltz@susmangodfrey.com

*Attorneys for Plaintiffs Green Mountain
Glass LLC and Culchrome LLC*

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I. INTRODUCTION

Defendant's Opening Claim Construction Brief proposes constructions that disregard plain and ordinary language, import limitations that do not exist in the claims or written descriptions, exclude the patents' preferred embodiments, and misstate the prosecution histories. The Court should reject Defendant's self-serving constructions, adopt the patents' given definition of mixed colored cullet, and rule that none of Defendant's other terms requires construction. To the extent Defendant's other terms are construed, the Court should adopt Green Mountain's proposed constructions.

II. TERMS FOR CONSTRUCTION

A. "Mixed Color[ed] Cullet" / "Mixed Color[ed] Glass Cullet" / "Unsorted Mixed Color[ed] Cullet"

Both patents expressly and unequivocally define "mixed colored cullet glass" as "broken pieces of glass of mixed colors and types" at the very beginning of the patents. JA Ex. 1, '737 1:14-15 ("The invention more particularly relates to methods and compositions whereby mixed colored cullet glass (*i.e., broken pieces of glass of mixed colors and types*) can be recycled to make useful glass products." (emphasis added)); JA Ex. 2, '521 1:11-12 (same). Defendant's proposed construction of "mixed colored cullet" improperly seeks to add two limitations that appear neither in the given definitions nor in the patents' claims: "post-consumer broken pieces of glass of mixed colors that have never been sorted by color." Defendant's Brief ("Defs. Br.") (D.I. 59) at 5 (emphasis added). The patents' claims, specifications, and prosecution histories uniformly reject both limitations. For the reasons that follow, this Court should too.

1. Defendant's "Post-Consumer" Limitation Should Be Rejected

There is a threshold problem with Defendant's argument that "post-consumer" must be read into the given definition of mixed colored cullet—it skips completely over *the claims of the*

patents and goes directly to their specifications and prosecution histories. Defendant thus violates the “bedrock principle” of claim construction that the “claim construction analysis must begin and remain centered on the claim language itself, for this is the language that the patentee has chosen to particularly point out and distinctly claim the subject matter which the patentee regards as his invention.” *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115-16 (Fed. Cir. 2004) (quotation and brackets omitted).

Here, those claims contain no requirement that the mixed colored cullet be solely post-consumer cullet—indeed, the phrase “post-consumer” nowhere appears in the claims of either patent. *See* JA Ex. 1, ’737; JA Ex. 2, ’521. Had the inventors intended such a limitation, they would have said so, either in the claims themselves or in their given definitions of mixed colored cullet. *See* Green Mountain Brief (“GM Br.”) (D.I. 60) at 6. The fact that they did *neither* counsels strongly against this Court inserting that limitation now. *Cf. Home Diagnostics, Inc. v. LifeScan, Inc.*, 381 F.3d 1352, 1358 (Fed. Cir. 2004) (“Absent a clear disavowal or contrary definition in the specification or the prosecution history, the patentee is entitled to the full scope of its claim language.”).

Defendant’s “post-consumer” limitation also contradicts the specification. Although Defendant claims that “[t]he specification defines ‘mixed color glass cullet’ as ‘broken pieces of glass of mixed colors and types’ that ‘is generally reclaimed, post-consumer glass,’” Defs. Br. at 5-6, Defendant is actually combining parts of two different passages in the patents. The first passage is where the inventors define “mixed colored cullet” and is Green Mountain’s proposed construction. *E.g.*, JA Ex. 1, ’737 1:12-16. The phrase “post-consumer” does not appear in that definition. The second passage shows why it would be a mistake to add that limitation:

The mixed colored cullet glass is *generally* reclaimed, post-consumer glass, *although the glass producer waste cullet can also be mixed therewith*, and

typically comprises a mixture of green glass, amber glass and flint (colorless) glass.

JA Ex. 1, '737 4:12-16 (emphasis added); JA Ex. 2, '521 8:1-6. That passage explains that “mixed colored cullet” can contain “glass producer waste cullet,” which by definition, is *not* “post-consumer” cullet. *See* JA Ex. 1, '737 1:41-43 (defining waste cullet as “off quality material and scrap from the manufacture of glass products”). Other passages in the '737 specification similarly confirm that mixed colored cullet need not be limited to “post-consumer” cullet. *See, e.g.*, JA Ex. 1, '737 3:29-32 (“It is an aspect of the present invention that mixed colored cullet *such as* recycled municipal waste cullet” (emphasis added)); *cf. Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 811 (Fed. Cir. 2002) (“[T]he term ‘such as’ means ‘of a kind or character about to be indicated, suggested, or exemplified.’”). Put simply, the patents themselves *explicitly* declare that mixed colored cullet can contain non-“post-consumer” cullet.

Defendant’s contrary construction thus violates two cardinal rules of claim construction. First, by importing the phrase “mixed colored cullet glass is generally reclaimed, post-consumer glass” from the description of the embodiments into the claims, Defendant improperly *limits* the claims to the embodiments. *See, e.g., Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) (“[W]e have expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment.”).

Second, by omitting “glass producer waste cullet” from the definition of “mixed colored cullet,” Defendant improperly *excludes* the preferred embodiments. *See, e.g., Rambus Inc. v. Rea*, 731 F.3d 1248, 1253 (Fed. Cir. 2013) (rejecting proposed construction that limited “write request” to a “multiple-bit request” because “[t]he plain language of the claim d[id] not contain that requirement” and “the specification expressly disclose[d] that ‘write request’ c[ould] be

embodied in a single bit”); *Paragon Solutions, LLC v. Timex Corporation*, 566 F.3d 1075, 1084-85 (Fed. Cir. 2009) (reversing construction of “data acquisition unit” as a single structure, where specification stated, “the data acquisition component . . . may even comprise multiple structures which are physically separate from each other”).

The prosecution histories also reject the “post-consumer” limitation. “For prosecution history to limit claim meaning, it must be clear and unmistakable that the patentee intended that limitation.” *Aria Diagnostics, Inc. v. Sequenom, Inc.*, 726 F.3d 1296, 1302 (Fed. Cir. 2013). The inventor’s reference to mixed colored cullet as “a previously discarded starting material,” Defs. Br. at 7 (quotation omitted), does not evidence a clear and unmistakable disavowal of non-“post-consumer” cullet in the mixed colored cullet. Indeed, the distinction between post-consumer and non-post-consumer cullet was *not even at issue* during prosecution, and the phrase “post-consumer” *nowhere appears* in the inventor’s remarks to the examiner. Context also shows that the above comment was directed only at one particular variety of cullet—specifically, the variety that results from “conventional glass recycling methods”—and *not at* other varieties of cullet, including for example, “the glass producer waste cullet” that both the original ’299 application and the ’737 patent disclose can be included in mixed colored cullet. *See* JA Ex. 3, U.S. Patent Application 08/399,299 at A0074; JA Ex. 1, ’737 4:12-16.

In fact, the prosecution of the ’737 patent *explicitly* demonstrates that mixed colored cullet can comprise non-“post-consumer” cullet. As originally drafted, the ’737 specification stated:

A quantity of mixed colored cullet is intimately mixed together with a virgin batch of conventional raw materials used for making amber colored glass, preferably carbon-sulfur amber glass. The minimum amount of mixed colored cullet in the batch may be affected by government regulations.

JA Ex. 3, U.S. Patent Application 08/399,299 at A0075 (emphasis added). But that passage was amended during the Preliminary Amendment, and as issued, the '737 specification now states:

A quantity of mixed colored cullet is intimately mixed together with a virgin batch of conventional glass raw materials used for making amber colored glass, preferably carbon-sulfur amber glass. The minimum amount of post consumer (recycled) cullet in the batch may be affected by government regulations.

JA Ex. 1, '737 5:9-14 (emphasis added); *see also* JA Ex. 5, Preliminary Amendment dated September 23, 1996, in the '737 Prosecution History ("JA Ex. 5, Preliminary Amendment") at A0098; *cf. Speedtrack, Inc. v. Endeca Technologies, Inc.*, 524 F. App'x 651, 656 (Fed. Cir. 2013) ("[W]e must presume a difference in meaning and scope between the two terms."). The inventor made this correction precisely because mixed colored cullet can comprise both "post-consumer cullet" and non-"post-consumer" cullet, and regulations only affect the former.

2. Defendant's "Never Been Sorted By Color" Limitation Should Be Rejected

Defendant also errs in reading the temporal limitation "never been sorted by color" into the inventors' definition of mixed colored cullet. The limitation finds no support in the claims, the specifications, or the prosecution histories. *See* GM Br. at 6-10.

As an initial matter, Defendant offers zero support *from the '521 patent* for applying its proposed construction to *that patent*. The word "unsorted" never appears in the '521 patent—not in its claims, its specification, or its prosecution history. The '521 patent nowhere indicates that "mixed colored cullet" is limited to cullet that has never been sorted by color. Just the opposite: The '521 specification adopts the term's plain and ordinary meaning: "broken pieces of glass of mixed colors." JA Ex. 2, '521 1:9-12 ("The invention more particularly relates to an automated method for recycling *mixed colored cullet glass (i.e., broken pieces of glass of mixed colors and types)* into new glass products." (emphasis added)); *see Edwards Lifesciences LLC v. Cook Inc.*,

582 F.3d 1322, 1334 (Fed. Cir. 2009) (“[T]he specification’s use of ‘i.e.’ signals an intent to define the word to which it refers . . .”).

Without any support from the ’521 patent, Defendant exports its mixed colored cullet arguments from the ’737 patent to the ’521 patent. *See* Defs. Br. at 10-11. But the ’521 patent stands separate and apart from the ’737 patent because it is not a continuation of, and does not claim priority from, the application that resulted in the ’737 patent. Indeed, the two patents do not even share an inventor. Defendant cites *no case* supporting its effort to use the ’737 patent to limit the plain meaning of the ’521 patent’s claims. Although Defendant points to three passages in the ’521 specification that either mention the ’737 patent or use words copied therefrom, Defs. Br. at 11 & n.3, none of those segments names the ’737 patent as its “parent”; nor does any of them incorporate the ’737 patent’s claims. Instead, the first segment simply notes that the ’737 patent is a “co-assigned related” patent; the second segment merely copies the ’737 specification’s description of the prior art (under the heading, “Description of the Prior Art,” JA Ex. 2, ’521 1:24); and the third segment just describes the ’737 patent’s method (under the heading “Mixed Cullet Recycling Method of [the ’737 Patent],” *id.* 7:64). Most importantly, none of the passages is sufficient to limit the scope of the ’521 patent’s claims. *See Home Diagnostics, Inc.*, 381 F.3d at 1358.

Defendant’s argument that Green Mountain “literally reads out unsorted” from the ’737 patent is also incorrect. The word “unsorted” does not appear in the given definition of “mixed colored cullet,” and Defendant concedes that “unsorted mixed color glass cullet” has the same meaning as “mixed color cullet.” By Defendant’s own admission, then, the given definition of “mixed colored cullet” controls.

Defendant now attempts to limit the effect of that concession by asserting, in a footnote, that “the claim terms ‘said mixed color glass cullet’ and ‘the mixed color glass cullet’ should be afforded the same construction as ‘unsorted mixed color glass cullet,’ because they are used only as a short-hand for ‘unsorted mixed color glass cullet’ and have no separate antecedent basis.” Defs. Br. at n.2. Defendant’s sleight of hand is not persuasive. For one thing, *contrary to Defendant’s suggestion otherwise, “mixed color cullet” is not preceded by “unsorted”, “said”, or “the” in claims 2, 11, or 20. See, e.g., JA Ex. 1, ’737 claim 2 (“A method as in claim 1, wherein said obtaining step comprises the step of obtaining *mixed color cullet* comprising flint, green and amber colored glass.” (emphasis added))*. But equally damning is the fact that, *even though “unsorted” never appears in the ’521 patent, Defendant argues that the term “mixed colored cullet” means the same thing in both patents*. Defendant’s concession that “unsorted” does not change the definition of “mixed colored cullet” resolves the issue.

The ’737 patent itself demonstrates that occasionally adding “unsorted” before “mixed color” does not change the meaning of “mixed colored cullet.” *Compare, e.g., JA Ex. 1, ’737 claim 1 with, e.g., id. claim 2*. The fact that its claims use the terms “unsorted mixed color glass cullet” and “mixed color cullet” interchangeably means “that the two *cannot be read* to have separate meanings.” *Bid for Position, LLC v. AOL, LLC*, 601 F.3d 1311, 1317 (Fed. Cir. 2010) (emphasis added). Here, “unsorted” is simply a word of emphasis for mixed colored cullet. *Cf. IGT v. Bally Gaming Int’l, Inc.*, 659 F.3d 1109, 1117 (Fed. Cir. 2011) (“Extracting a single word from a claim divorced from the surrounding limitations can lead construction astray.”). And it certainly does not add a temporal limitation, as “unsorted” does not mean “never been sorted.” GM Br. at 8. In other words, even if “unsorted” was intended to modify “mixed colored cullet” (it was not), the plain meaning of “unsorted mixed colored cullet” would be “not sorted broken

pieces of glass of mixed colors” and *not*, as Defendant claims, “broken pieces of glass of mixed colors that have never been sorted by color.” Defendant’s brief, like the patents, offers zero support for the proposed temporal limitation.

Unable to rely on the claims or the given definition of mixed colored cullet, Defendant falls back on two quotes from the “Background of the Invention,” both of which are taken out of context. *See* Defs. Br. at 6. Defendant first claims that its “never been sorted by color” construction is compelled by the statement, “[a] by-product of glass recycling, even when an attempt is made to sort the glass by color, is a quantity of mixed colored pieces.” *Id.* But that passage does not say the cullet was “never” sorted; it actually says the cullet *was sorted*, just poorly so. Neither the above excerpt nor anything else requires that the mixed colored cullet only contains “broken pieces of glass of mixed colors” that have “never been sorted by color.”

Such a construction would actually exclude the patents’ preferred embodiments. As discussed above, those embodiments explicitly contemplate that a glassmaker may “mix[]” “glass producer waste cullet” with “reclaimed, post-consumer glass” to obtain mixed colored cullet. *E.g.*, JA Ex. 1, ’737 4:14-16. That “glass producer waste cullet” will *always* be sorted by color before it is used to create mixed colored cullet because it is the single-color waste glass that results from one furnace. A furnace that produces amber bottles, for example, produces only amber cullet as waste. And because those broken pieces of glass will be sorted by color before they are mixed with broken pieces of glass of other colors to form “mixed colored cullet,” it simply is not true that those “broken pieces of glass of mixed colors” have “never been sorted by color.” Defendant’s construction thus errs by excluding the patents’ preferred embodiments.

Defendant is also wrong to claim that its construction is supported by the specification’s statement that “[i]t would be desirable to develop a process for re-using mixed colored glass,

wherein mixed colored cullet can be used like color sorted cullet, to make new and useful glass products.” Defs. Br. at 6. Here again, that quote says nothing about the mixed colored cullet having “never been sorted by color”; instead, it merely acknowledges the distinction between “mixed colored cullet” and “color sorted cullet.” And by comparing those raw materials at the time they are “used” to make glass, the excerpt reinforces the fact the terms “mixed colored cullet” and “color sorted cullet” refer to the cullet’s state *at the time it is added to the batch*, and *not* to its prior history or origin, whatever that may be. *Accord* GM Br. at 8.

Defendant’s reliance on this passage underscores its mistaken understanding of mixed colored cullet. While there is undoubtedly a difference between “color sorted cullet” (or “sorted single color cullet”) and “mixed colored cullet” (or “unsorted mixed colored cullet”), that difference inheres in the color composition of the cullet, *not* in how that cullet was obtained. Indeed, the patents themselves are indifferent as to how mixed colored cullet is obtained. *E.g.*, JA Ex. 1, ’737 4:11-12 (“In the method of the invention a quantity of mixed colored cullet glass is provided.”). And as the ’737 specification stresses, the object of the invention was “to provide a method of producing one color homogeneous glass from mixed colored cullet glasses.” *Id.* 3:47-49. Whether the mixed colored cullet glasses were or were not previously sorted by color is irrelevant to whether they can now be used to make a one color homogenous glass product.

Defendant’s “never been sorted by color” construction also misrepresents the ’737 patent’s prosecution history. Defendant’s assertion that the ’737 patent was amended specifically to add “unsorted” to the claims is not correct for at least three independent reasons. *First*, like the patent and its claims, the inventor used the terms “unsorted mixed color glass cullet” and “mixed color glass cullet” interchangeably throughout the patent’s prosecution:

- “As noted above, the claimed invention relates to a method of recycling unsorted mixed color glass cullet into a recycled glass product of a particular

color by selectively colorizing/decolorizing unwanted glass colors in the mixed color glass cullet.” JA Ex. 5, Preliminary Amendment at A0109 (emphasis added).

- “Hirsch simply discloses the notoriously well-known method of using selenium or selenium compounds to decolorize glass. As acknowledged by the Examiner, Hirsch makes no mention of mixed colored glass cullet.” *Id.* at A0109-10 (emphasis added).
- “To Applicant’s knowledge, there is no indication in the prior art that one skilled in the art would know how to use mixed color glass cullet as a starting material for creating a recycled glass product of a particular color by selectively decolorizing and/or colorizing the unsorted mixed color glass cullet as claimed.” *Id.* at A0111 (emphasis added).
- “None of the prior art suggests such recycling of the mixed color glass cullet.” *Id.* at A0112 (emphasis added).

These statements confirm that occasionally adding the word “unsorted” before “mixed color” does not change the meaning of mixed colored cullet, and certainly do not evidence “a clear and unmistakable” disavowal that mixed colored cullet be limited to cullet that has “never been sorted by color.” *See Aria Diagnostics*, 726 F.3d at 1302.

Second, the examiner continued to refer to mixed colored cullet as “mixed glass cullet” and “mixed cullet” after the word “unsorted” was added to the patent. *See* JA Ex. 11, Office Action Summary dated April 24, 1997, in the ’737 Prosecution History at A0222. This demonstrates that the examiner himself did not interpret the applicant’s occasional use of the word “unsorted,” during prosecution or in the patent itself, as limiting “mixed colored cullet” to cullet that had “never been sorted by color.” The examiner’s statements dispel any notion of a prosecution-era disavowal. *See, e.g., Toshiba Corp. v. Imation Corp.*, 681 F.3d 1358, 1370 (Fed. Cir. 2012) (rejecting disavowal claim in light of examiner’s statements); *Ventana Med. Sys., Inc. v. Biogenex Labs., Inc.*, 473 F.3d 1173, 1183 (Fed. Cir. 2006) (same).

Third, the purpose of the Preliminary Amendment was *not* to insert “unsorted” into the claims; it was to clarify that the invention could be used to produce green and flint glass in addition to amber glass. *See* JA Ex. 5, Preliminary Amendment. Although changes to the abstract and the specification also bear this out, the fact that “unsorted” was not the focus of the amendment is readily apparent from the amendment’s changes to the title of the ’737 patent. Whereas the title formerly read, “Method of Recycling Mixed Colored Cullet Into *Amber Colored Glass*,” JA Ex. 3, U.S. Patent Application 08/399,299 at A0069 (emphasis added), the amendment, which was adopted, requested that the title be changed to “A Method of Recycling Mixed Colored Cullet Into *Amber, Green, or Flint Glass*.” JA Ex. 5, Preliminary Amendment at A0094 (emphasis added). Notably, the amendment left “mixed colored cullet” unchanged.

* * *

Finally, the Court should reject Defendant’s “never been sorted by color” limitation because it would be unworkable in practice. When glassmakers add cullet to their furnaces, they know whether that cullet is *currently* mixed colored cullet by inspecting it. But those glassmakers have no way of knowing whether that *same* cullet has *previously* been sorted by color at some point prior to ending up on the batch floor. For those glassmakers, and for the asserted patents, the only point in time in which it matters whether the cullet is mixed colored cullet is when that cullet is added to the batch. Defendant’s construction ignores that distinction.

B. “At Least Two Different Colors”

This term is straightforward and needs no construction. The Court should reject Defendant’s construction of “at least two different colors” for importing a limitation that contradicts the plain language of the claims and the specification. The mere fact that the specification sometimes describes flint glass as “colorless” glass does *not* mean that flint glass is

not one of the “at least two different colors” of glass contained in mixed colored cullet. Both the claims and the specification *expressly* state just the *opposite*. That is because although flint glass is sometimes described as “colorless,” it is always described as one of three main colors of cullet.

In fact, all of the dependent claims that describe the independent claims’ obtaining steps—i.e., the very steps that define the type of mixed colored cullet that must be obtained and used in the methods—state that glassmakers may obtain “*mixed color cullet comprising flint . . . colored glass.*” JA Ex. 1, ’737 claims 2, 11, 20 (emphasis added). “Because the patentee is required to define precisely what his invention is . . . it is unjust to the public, as well as an evasion of the law, to construe it in a manner different from the plain import of its terms.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (quotation omitted). This should end the inquiry. *See Am. Piledriving Equip., Inc. v. Geoquip, Inc.*, 637 F.3d 1324, 1333 (Fed. Cir. 2011) (“[T]he usage of the term in one claim can often illuminate the meaning of the same term in other claims. Thus, the meaning of the term . . . apparent from claim 16 is equally applicable to independent claims 1, 6, and 11.” (quotation, citation, and brackets omitted)).

Defendant does not (and cannot) reconcile the claim language with its proposed construction. Indeed, despite the fact that *nine* different claims state that “flint” colored glass is contained in mixed colored cullet, JA Ex. 1, ’737 claims 2, 3, 4, 11, 12, 13, 20, 21, 22, Defendant disregards those claims entirely—they are not even mentioned in its brief. Defendant’s failure to give effect to *all* claim language is dispositive. *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006) (“Allowing a patentee to argue that physical structures and characteristics specifically described in a claim are merely superfluous would render the scope of the patent ambiguous, leaving examiners and the public to guess about which claim language the drafter

deems necessary to his claimed invention and which language is merely superfluous, nonlimiting elaboration.”).

Moreover, while Defendant makes much of the fact that the specification often (but not always) refers to flint glass as being “colorless,” Defendant ignores other statements in the specification that state that flint glass can be—and “*typically*” is—one of the “at least two different colors” of cullet contained in mixed colored cullet. JA Ex. 1, ’737 2:3-5 (emphasis added) (explaining that “a typical color distribution” of mixed colored cullet “is approximately 65% flint (colorless), 20% amber, and 15% green”). Defendant also overlooks the specification’s two separate references to “flint colored” glass bottles. *See id.* 4:5-6; *id.* 4:42. And Defendant never explains why “flint” glass is inextricably linked with “amber” and “green” glass throughout the claims and the specification if “flint” is *not* a color of glass. *Cf. Jewelpak Corp. v. United States*, 297 F.3d 1326, 1331 n.3 (Fed. Cir. 2002) (“Literally ‘it is known from its associates,’ the doctrine of *noscitur a sociis* provides that the meaning of questionable or doubtful words or phrases in a statute may be ascertained by reference to the meaning of other words or phrases associated with it.”).

C. “Finished Glass Product” / “Recycled Glass Product”

Defendant does not even attempt to argue that either of these disputed terms—“finished glass product” and “recycled glass product”—are ambiguous. They are not. The very examples Defendant cites indicate that the terms are used in their plain and ordinary meaning. Therefore, no construction is required.

Defendant proposes to construe these terms to be synonymous—but offers no reason to do so, aside from Defendant’s observation that the terms, in some parts of the patent, “*appear to be used interchangeably.*” Defs. Br. at 12 (emphasis added). Defendant cites no case that

construes two terms as synonymous in *every* instance, simply because those terms appear to be “used interchangeably” in *some* instances.

Construing “finished” to mean “recycled,” and “recycled” to mean “finished,” would cause *more* confusion, not less. The terms’ plain and ordinary meanings will be known to the jury—so an instruction to the jury to disregard those meanings, and instead define the one term to mean the other, will produce much head-scratching, for no discernible reason.

D. “Glass Coloring Oxide Agent”

As Green Mountain explained in its opening brief, this term need not be construed. To the extent the Court does construe “glass coloring oxide agent,” Green Mountain’s proposal would be the most accurate: “an agent that affects the color of glass.” Contrary to that plain and ordinary meaning of the term, Defendant proposes three limitations. The claim language and specification do not support Defendant’s proposals. Just the opposite, in fact:

- *First*, Defendant’s proposed limitation of “agent” as meaning only a “virgin raw material” is incorrect because cullet itself, in addition to virgin raw materials, is an agent that includes colorizers, GM Br. at 13-14; *see* JA Ex. 2, ’521 claim 1, step 7; *see also id.* 10:27-30; *id.* 12:32-34;
- *Second*, Defendant’s proposed limitation of “agent” as a raw material “included for the sole purpose” of providing a coloring agent is flawed because some coloring agents are included for other purposes, besides affecting color. For example, two of the “preferred coloring agents” of amber are salt cake and slag. JA Ex. 2, ’521 10:61-65. Yet neither agent is typically added for the “sole purpose” of coloring, as is demonstrated by the treatise incorporated by reference. *See* JA Ex. 12, Samuel R. Scholes, *Modern Glass Practice* at A240 (“salt cake” is “valuable in disposing of

- silica that has escaped solution in the melt, and which would otherwise persist as a floating scum”; salt cake also “supplies as much as one-fifth the soda” in the batch); *id.* Ex. 13 at A261 (“Probably the most important fining agent [i.e., agent for removing air bubbles] used in the glass industry is sodium sulfate, commonly known as salt cake.”); *id.* Ex. 12 at A236 (“Slags . . . are sometimes used as sources of alumina, lime, and silica.”); *see* JA Ex. 2, ’521 8:55-60 (incorporating treatise); and
- *Third*, Defendant is incorrect that every glass coloring oxide agent must “provide[] an oxide.” The word “oxide” in this term refers to the structure of the glass. GM Br. at 13-14. The coloring agents in oxide-based glass are not always themselves oxides—as the specification indicates in certain examples. *See id.* (JA Ex. 2, ’521 10:33-35 (“physical decolorizing agents” include “selenides”)).

Defendant ignores the intrinsic evidence just cited, and instead focuses on a different term altogether—a term that Defendant never proposed for construction in the first place—namely, the words “coloring oxides.” Defs. Br. at 13-15. The words “coloring oxides” appear (without the word “agent”) in dependent claim 11 and dependent claim 12. Defendant claims to be “seek[ing] to clarify the distinction between the two terms.” *Id.* at 14. Yet Defendant overlooks the obvious distinction: While claim 1 claims *all* “glass coloring oxide agents,” the dependent claims 11 and 12 refer specifically to a certain type of coloring agents that are themselves “coloring oxides.” Dependent claim 12 names four of them: the “oxides of chrome, iron, sulfur, and copper.” JA Ex. 2, ’521 claim 12.

Defendant’s reading of “glass coloring oxide agent” would violate a cardinal principle of claim construction, by reading dependent claim 11 as being broader, in two important ways, than independent claim 1. *See, e.g., Alcon Research, Ltd. v. Apotex Inc.*, 687 F.3d 1362, 1367 (Fed.

Cir. 2012) (“It is axiomatic that a dependent claim cannot be broader than the claim from which it depends.”). Independent claim 1 refers to calculating amounts of “glass coloring oxide agents,” and, under Defendant’s reading, these agents are limited to (1) virgin raw materials; that (2) are included for the sole purpose of affecting color. Dependent claim 11 would be broader, under Defendant’s reading, in both ways. That is because claim 11 includes all “coloring oxides,” including (1) oxides from any source (raw materials or cullet), and (2) oxides added for any purpose (colorizing or, for example, providing soda or assisting in the “fining” process).

Green Mountain’s reading creates no such problems with the canons of claim construction but rather flows directly from them. In Green Mountain’s reading, the term “glass coloring oxide agent” refers to an agent that affects the glass’s color. Independent claim 1 claims the use of all such coloring agents; dependent claims 11 and 12, by contrast, are limited to subsets of those agents. No construction is necessary.

E. “Specifying . . . Transmission Properties”¹

The ’521 patent teaches a method for using mixed colored cullet to make glass products that have intended “transmission properties” (e.g., color and thickness), which the glassmaker specifies “prior to melting” the raw materials. Defendant proposes to limit the term “transmission properties” to those properties that are “sufficient to define said particular color.” Defendant’s proposal should be rejected in favor of the plain and ordinary meaning of

¹ Based on Defendant’s exhibits, it appears that Defendant plans to offer deposition testimony from the inventor to support its proposed construction of this term. Although that testimony supports the plain and ordinary meaning of the claim terms, Green Mountain, in keeping with longstanding precedent, does not rely on quotes from the inventor to support its proposed alternative constructions. *See, e.g., Howmedica Osteonics Corp. v. Wright Med. Tech., Inc.*, 540 F.3d 1337, 1346-47 (Fed. Cir. 2008) (“The testimony of an inventor ‘cannot be relied on to change the meaning of the claims.’” (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 983 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996))).

“transmission properties.” Defendant’s proposal would inject needless confusion by requiring the jury to answer this additional question: what “suffices” to “define” a color?

Defendant appears to suggest that its definition is required because in step 6 (the first “calculating step”) the glassmaker “calculate[s]” the desired coloring agent levels based on the “specified transmission properties” that he intends the finished glass to have. As Defendant acknowledges, “[t]hose results” from step 6 “are then relied upon in the second calculating step [step 7].” Defs. Br. at 16. What Defendant appears to suggest is that unless the transmission properties used in step 6 are “sufficient to define the color,” then the output of step 6’s calculation will not be sufficiently “rel[iable]” for the glassmaker to use in step 7. *See id.*

Defendant’s concern is a chimera. Defendant is correct that a glassmaker who specifies insufficient transmission properties (for instance, by specifying only the thickness of the finished glass, and nothing else) will not obtain sufficiently “reli[able] information,” in Step 6, to then perform the calculation described in step 7. The concern is a chimera because this glassmaker does not infringe the patent: He has not performed the calculation steps (6 and 7). Nothing in this concern requires the additional definition that Defendant proposes.

Finally, Defendant suggests that Green Mountain’s proposed construction would “read out” the term “prior to melting.” Defs. Br. at 16. The suggestion is not supportable. Neither party proposed for construction the phrase “prior to melting,” because its meaning is plain on its face: The transmission properties must be specified prior to melting the glass. It simply does not follow that the properties must also be “sufficient to define” the color.

F. “Calculating . . . Glass Coloring Oxide Agent Levels and Key Glass Color Indicator Parameters” / “Calculating . . . A Composition”

Defendant seeks to import two limitations into steps 6 and 7 of the ’521 patent’s independent claims (these are “calculating” steps): first, Defendant would limit the information

that the glassmaker may consider in performing both calculations (by adding the limitation “not based on process feedback”); and second, Defendant would limit the timing of the second calculation in step 7 (by adding the limitation “in real time”). Neither limitation is appropriate.

Defendant argues that these two limitations would “clarif[y] that ‘calculating’ means performing a mathematical, formulaic, and quantitative calculation.” Defs. Br. at 18. The limitations would also, Defendant claims, “clarif[y]” that “calculating” does *not* mean “iterative ‘trial and error’ techniques.” *Id.* Yet Defendant’s proposals would *not* clarify the meaning of “calculating.” The meaning of the word “calculate” is clear: Jurors will understand what “calculate” means. Instead of “clarifying” the meaning of “calculate,” Defendant’s proposal would improperly limit the information the glassmaker may consider in performing his calculation (forbidding him from using any quality-control checks), and would improperly limit the time when the glassmaker must make his calculation in step 7 (by requiring him to perform this calculation in “real time”).

1. Defendant’s “Process feedback” Limitation Should Be Rejected

Nothing in the prosecution history even approaches a “clear and unmistakable disavowal” of the use of “process feedback.” *See Purdue Pharma L.P. v. Endo Pharm. Inc.*, 438 F.3d 1123, 1136 (Fed. Cir. 2006). During prosecution, the applicant distinguished the ’521 patent’s method from a trial-and-error process that does not perform any pre-melting calculation. JA Ex. 6, ’521 Prosecution History, Response to Office Action dated September 7, 1999, in the ’521 Prosecution History at A0129, A0133. These statements indicated, not that process feedback would *never be used* by a glassmaker following the ’521 method, but rather that the ’521 method contains *something more than process feedback alone*.

This distinction is made clear in the existing claim language—no further explanation is required. Specifically, the independent claims contain two “calculating” steps. A glassmaker who performs no “calculations,” but instead derives his formula solely from trial and error (i.e., only using “process feedback”) does not perform any “calculating” steps and thus does not practice the ’521 patent’s method. It does not follow that a glassmaker who *both* performs the claimed calculating steps *and* also uses some process feedback (i.e., performs quality-control checks) thereby escapes infringement because he performs the additional step of checking his work. “In evaluating whether a patentee has disavowed claim scope, context matters.” *i4i Ltd. P’ship v. Microsoft Corp.*, 598 F.3d 831, 843 (Fed. Cir. 2010), *aff’d*, 131 S. Ct. 2238 (2011). Here, the context includes the open-ended term “comprising”—i.e., the patent’s independent claims describe a “method . . . *comprising* the steps of.” JA Ex. 2, ’521 claim 1 (preamble) (emphasis added). The word “comprising” means that the glassmaker may perform additional steps not listed in the claims. *See Dippin’ Dots, Inc. v. Mosey*, 476 F.3d 1337, 1343 (Fed. Cir. 2007). So long as a glassmaker performs all the steps in a “comprising” claim, the glassmaker infringes, even if the glassmaker also adds an additional step of using process feedback. *See id.*

2. Defendant’s “Real time” Limitation Should be Rejected

Defendant proposes to further limit step 7 by requiring the glassmaker to perform his calculations “in real time.” This limitation, too, finds no support in the prosecution history, let alone any hint of a “clear and unmistakable disavowal” of non-real-time calculations. *Purdue Pharma.*, 438 F.3d at 1136. Far from disavowing non-real-time calculations, the applicant instead highlighted one advantage of the ’521 method: The method “*allows*” the “amounts of colorants and decolorants added to the glass batch to be adjusted in real time.” JA Ex. 6 at A129-30 (emphasis added). By noting that the method “allows” for real-time calculation, the

applicant did not thereby disavow all of the other possible times at which the calculation could be performed. *See Purdue Pharma*, 438 F.3d at 1136 (no “disavowal” where the prosecution-history statement described “a property of, or a result of,” the invention); *see also Creative Integrated Sys., Inc. v. Nintendo of Am., Inc.*, 526 F. App’x 927, 934 (Fed. Cir. 2013) (reversing district court’s claim construction because district court improperly limited the scope of the claim language based on a statement during prosecution that, while “describ[ing]” one “embodiment” of the invention, “disavows nothing”).

Not only is Defendant’s proposed limitation unsupported by the prosecution history, it is also contradicted by the claim language and by the written description of a preferred embodiment. *First*, by requiring the glassmaker to perform step 7 in “real time,” Defendant’s proposed limitation would thereby render claim 15 inherently impossible. Claim 15 adds the “additional step” of “printing” out the batch formula, which would take too long to allow for “real-time” adjustments to that formula. JA Ex. 2, ’521 claim 15. Similarly, the preferred embodiment of the invention also describes a gap in time between step 7 and the melting of the glass—thus ruling out the requirement that step 7 occur in “real time” in every case. *Id.* 17:27-36 (“results” of calculations are “printed,” and this data is then “transfer[red]” to “the glass manufacturing operation, *either manually or* by computerized control” (emphasis added)). *See Rambus*, 731 F.3d at 1253 (rejecting proposed construction that would contradict the embodiment described in the specification).

III. CONCLUSION

For the foregoing reasons, Defendant’s proposed constructions should be rejected, in favor of the plain and ordinary meanings of the disputed terms.

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Respectfully submitted,

FARNAN LLP

/s/ Brian E. Farnan

Brian E. Farnan (Bar No. 4089)
Michael J. Farnan (Bar No. 5165)
919 North Market Street, 12th Floor
Wilmington, DE 19801
Telephone: (302) 777-0300
Facsimile: (302) 777-0301
Email: bfarnan@farnanlaw.com
Email: mfarnan@farnanlaw.com

Justin A. Nelson (admitted *pro hac vice*)
Matthew R. Berry (admitted *pro hac vice*)
John E. Schiltz (admitted *pro hac vice*)
SUSMAN GODFREY L.L.P.
1201 Third Avenue, Suite 3800
Seattle, WA 98101-3000
Telephone: (206) 516-3880
Facsimile: (206) 516-3883
Email: jnelson@susmangodfrey.com
Email: mberry@susmangodfrey.com
Email: jschiltz@susmangodfrey.com

Max L. Tribble, Jr. (admitted *pro hac vice*)
SUSMAN GODFREY L.L.P.
1000 Louisiana Street, Suite 5100
Houston, TX 77002
Telephone: (713) 651-9366
Facsimile: (713) 654-6666
Email: mtribble@susmangodfrey.com

Steven M. Shepard (admitted *pro hac vice*)
560 Lexington Avenue, 15th Floor
New York, New York 10022
Telephone: (212) 336 8330
Facsimile: (212) 336 8340
Email: sshepard@susmangodfrey.com

Robert S. Bramson (admitted *pro hac vice*)
BRAMSON & PRESSMAN
1100 East Hector Street, Suite 410
Conshohocken, PA 19428
Telephone: (610) 260-4444

Facsimile: (610) 260-4445
Email: rbramson@b-p.com

**Attorneys for Green Mountain Glass LLC
and Culchrome LLC**